PERIOPERATIVE AND POSTOPERATIVE NURSING CARE

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Perioperative nursing care:

The **preoperative phase** begins when the decision to proceed with surgical intervention is made and ends with the transfer of the patient onto the operating room (OR).

In the Holding Area:

1. Assesses patient's status, baseline pain, and nutritional status
2. Reviews chart
3. Identifies patient
4. Verifies surgical site and marks site per institutional policy
6. Administer medications if prescribed
7. Takes measures to ensure patient's comfort
8. Provides psychological support

Preoperative Nursing assessment:

The goal in the preoperative period is for the patient to be as healthy as possible. Every attempt is made to address risk Factors that otherwise lead to postoperative complications and hinder. a health history is obtained, a physical examination is performed during which vital signs are noted. Blood tests, x-rays, and other diagnostic tests are prescribed.

Nutritional and Fluid Status:

Optimal nutrition is an essential factor in promoting healing and resisting infection and other surgical complications. Assessment of a patient's nutritional status identifies factors that can affect the patient's surgical course, such as obesity weight loss, malnutrition, metabolic abnormalities. Any nutritional deficiency, such as malnutrition, should be corrected before surgery to provide adequate protein for tissue repair.

Respiratory Status:

The patient is taught breathing exercises and the use of an incentive Spirometer if indicated. Because ventilation is potentially compromised during all phases of surgical treatment, surgery is usually postponed if the patient has a respiratory infection. Patients with underlying respiratory disease are assessed carefully for current threats to their pulmonary status.

Cardiovascular Status:

The goal in preparing any patient for surgery is to ensure a well-functioning cardiovascular system to meet the oxygen, fluid, and nutritional needs of the perioperative period. If the patient has uncontrolled hypertension, surgery may be postponed until the blood pressure is under control.

Hepatic and Renal Function:

The liver is important in the biotransformation of anesthetic compounds. Therefore, any disorder of the liver has an effect on how anesthetic agents are metabolized. Because acute liver disease is associated with high surgical mortality, preoperative improvement in liver function is a goal. Careful assessment may include various liver function tests .

Endocrine Function:

The patient with diabetes who is undergoing surgery is at risk for hypoglycemia and hyperglycemia.

Hyperglycemia, which can increase the risk for surgical wound infection, may result from the stress of surgery, which can trigger increased levels of catecholamine. Frequent monitoring of blood glucose levels is important before, during, and after surgery.

Previous Medication Use:

A medication history is obtained because of the possible effects of medications on the patient's perioperative course, including the possibility of drug interactions. Any medication the patient is using or has used in the past is documented, including herbal agents, and the frequency with which they are used. Many medications have an effect on physiologic functions; interactions of such medications with anesthetic agents can cause serious problems, such as arterial hypotension and circulatory collapse.

Preparing the Bowel

Enemas are not commonly prescribed preoperatively unless the patient is undergoing abdominal or pelvic surgery. In this case, a cleansing enema or laxative may be prescribed

the evening before surgery and may be repeated the morning of surgery. The goals of this preparation are to allow satisfactory visualization of the surgical site and to prevent trauma to the intestine or contamination of the peritoneum by fecal material. Unless the condition of the patient presents some contraindication, the toilet or bedside commode, rather than the bedpan, is used for evacuating the enema if the patient is hospitalized during this time. In addition, antibiotics may be prescribed to reduce intestinal flora.

The postoperative period:

The **postoperative phase** begins with the admission of the patient to the PACU (Post-Anesthesia Recovery Unit) and ends with a follow-up evaluation in the clinical setting or home. Nursing care focuses on reestablishing the patient's physiologic equilibrium, alleviating pain, preventing complications, and teaching the patient self-care.
Careful assessment and immediate intervention assist.

Nursing Management after Surgery

During the first 24 hours after surgery, nursing care of the Hospitalized patient on the general medical-surgical unit involves continuing to help the patient recover from the effects of anesthesia, frequently assessing the patient's physiologic status, monitoring for complications, managing pain, and implementing measures designed to achieve the long range goals of independence with self-care, successful management of the therapeutic regimen, discharge to home, and full recovery.

Assessment

Assessment of the hospitalized postoperative patient includes monitoring vital signs and completing a review of systems upon the patient's arrival to the clinical unit and at regular intervals thereafter.
Respiratory status is important because pulmonary complications are among the most frequent and serious problems encountered by the surgical patient.

Nursing postoperative Interventions includes:

1. Assess breathing and administer supplemental oxygen, if prescribed.
2. Monitor vital signs and note skin warmth, moisture, and color.
3. Assess the surgical site and wound drainage systems. Connect all drainage tubes to gravity or suction as indicated and monitor closed drainage systems.
4. Assess level of consciousness, orientation, and ability to move extremities.
5. Assess pain level, pain characteristics (location, quality) and timing, type, and route of administration of last dose of analgesic.
6. Administer analgesics as prescribed and assess their effectiveness in relieving pain.
7. Position the patient to enhance comfort, safety, and lung expansion.
8. Assess IV sites for patency and infusions for correct rate and solution.
9. Assess urine output in closed drainage system or the patient's urge to void and bladder distention.
10. Reinforce the need to begin deep breathing and leg exercises.

Nursing Diagnoses:

Major nursing diagnoses may include the following:

- Risk for ineffective airway clearance related to depressed respiratory function, pain, and bed rest
- Acute pain related to surgical incision
- Decreased cardiac output related to shock or hemorrhage
- Risk for activity intolerance related to generalized weakness secondary to surgery

- Ineffective thermoregulation related to surgical environment and anesthetic agents
- Risk for imbalanced nutrition, less than body requirements related to decreased intake and increased need
- Risk for urinary retention related to anesthetic agents
- Risk for injury related to surgical procedure/positioning or anesthetic agents.

Nursing Interventions:

Preventing Respiratory Complications:

Respiratory depressive effects of opioid medications, decreased lung expansion secondary to pain, and decreased mobility combine to put the patient at risk for common respiratory complications, particularly atelectasis (alveolar collapse; incomplete expansion of the lung), pneumonia, and hypoxemia .
Risk for hypoxemia is increased in patients who have undergone major surgery (particularly abdominal), are obese, or have preexisting pulmonary problems.

Relieving Pain

Most patients experience some pain after a surgical procedure. The degree and severity of postoperative pain and the patient's tolerance for pain depend on the incision site, the nature of the surgical procedure, the extent of surgical trauma, the type of anesthesia, and route of administration.

Promoting Bowel Function

Constipation is common after surgery and can be minor or a serious complication. Decreased mobility, decreased oral intake, and opioid analgesics contribute to difficulty having a bowel movement. In addition, irritation and trauma to the bowel during surgery may inhibit intestinal movement for several days.

Managing Voiding

Urinary retention after surgery can occur for various reasons. Anesthetics, anticholinergic agents, and opioids interfere with the perception of bladder fullness and the urge to void and inhibit the ability to initiate voiding and completely empty the bladder.
Bladder distention and the urge to void should be assessed at the time of the patient’s arrival on the unit and frequently thereafter. The patient is expected to void within 8 hours after surgery .

Potential problems that leads to postoperative discomfort:

1-Pain and anxiety
2-Nausea and vomiting
3. Confusion and headaches
4-ineffective airway
5-hyperthermia or hypothermia

Potential Postoperative complications:

body system/type	*Complications*
Respiratory	Atelectasis, pneumonia, PE aspiration.
Cardiovascular	Shock, thrombophlebitis.
Neurologic	Delirium, stroke.
Skin/wound	Breakdown, infection, dehiscence, evisceration, delayed healing, hemorrhage, and hematoma.
Gastrointestinal	Constipation, paralytic ileus, bowel obstruction.
Urinary	Acute urine retention, urinary tract infection.
Functional	Weakness, fatigue, functional decline.

References:

1. BRUNNER & SUDDARTH'S: textbook of Medical-Surgical Nursing (twelfth edition) [Vol 1]. Preoperative nursing management (pp.424), Postoperative nursing management (pp.461).

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